

I. Introduction

A. Purpose of the Watershed Action Plan

This watershed action plan is product of the efforts of a broad group of stakeholders (the Watershed Team). The purpose of the plan is to coordinate efforts, focus resources, and identify opportunities and partnerships to accomplish common objectives within the watershed. Although water quality and quantity may be the more important topics in the action plan, the scope of this plan covers a broad range of topics and issues which all share a common watershed boundary.

Why Organize Around Watersheds?

Watersheds are natural ecological systems containing land, water, plants, animals, and humans. All of the land that drains to the outlet of a lake, stream, or ocean is located within one watershed, and all land is located in one watershed or another. Unlike arbitrary political boundaries, watershed boundaries are delineated by the natural contours of the land and the flow of water. Water from snowmelt and rainfall flow from the high elevation boundaries of a watershed into lower elevations containing streams, lakes, oceans and other water bodies.

People are accustomed to dividing land into areas defined by man-made state and municipal boundaries. Traditional land and resource planning is organized around these city, town, and state borders. Increasingly, however, people are finding it makes more ecological sense to plan resource management around watershed boundaries. Today's most pressing environmental problems are more interconnected and complex than in the past. By treating a watershed ecosystem as an integrated whole, cumulative impacts of population and growth can be more adequately addressed. Planning around a watershed requires an understanding of how all the organisms and activities within it are connected.

B. The Rhode Island Watershed Approach: Making Connections

Some of the underlying concepts that guide the Rhode Island Watershed Approach include:

- *The land within a watershed has a natural connection to the water within its boundaries.* When an activity takes place on the land, the water draining down the land is affected. The condition and quality of water at any point in a waterbody is directly related to activities that take place on the surrounding land.

- *Activities upstream have a direct impact on water quality downstream.* As

General Definitions:
(Taken from the
Rhode Island Water-
shed Approach
Framework Document,
June 1999.)

Watershed: The area of land that drains to the outlet of a lake, stream, ocean, or other water body. All land is in one watershed or another; large watersheds can be subdivided into smaller watersheds.

Stakeholders: People who may affect or be affected by the outcomes of projects or programs. This includes all the people living and working in the watershed area.

Watershed

Approach: A strategy that promotes the integration of public and private stakeholder interests in working toward a common goal- to support the sustainable use of natural resources.

Point Source

Pollution: Pollution discharges from identifiable sources, such as pipes at sewage treatment plants.

Nonpoint Source Pollution: Dispersed sources of pollution carried to waterways in stormwater runoff. Nonpoint sources include salt and sand from roadways, and pesticides and fertilizers from lawns

Any river is really the summation of the whole valley. To think of it as nothing but water is to ignore the greater part.

Hal Borland,
This Hill, This Valley

water flows across land and into streams and rivers, it carries pollutants along the way. The collective effects of harmful activities carried out miles upstream affect downstream communities. Rather than evaluating each negative impact separately, it is necessary to consider the cumulative impacts of these point and non-point source pollutants.

-Watersheds connect communities across man-made boundaries. Because watersheds do not stop at town or state lines, residents and business people in different states and municipalities need to work together to achieve effective resource management.

-Human land use decisions are connected to water quality and watershed health. How land is used- where open space is protected, how land is zoned, where industrial sites are permitted, how landfills are used and managed- has a direct and measurable impact on all natural resources within a watershed.

-Human quality of life and economic health is directly linked to environmental health. People depend on the environment for their drinking water, food, recreation and livelihood. Within watersheds are homes, schools, and businesses. When natural resources within the watershed are degraded, the problem not only impacts the environment, but also affects quality of life and the economy.

-The decisions we make today impact the future. Human actions can have long-lasting effects on the environment. The results of poor land and water use decisions may take generations to detect and repair. Conversely, careful planning and organized management can help shape the future for the common good.

The Rhode Island Watershed Approach recognizes these connections, and attempts to address environmental management issues by planning around watershed ecosystems. This innovative approach is based on an understanding that local people's interests in land and water should be linked to decisions that affect these resources. Natural resource management is greatly enhanced by the involvement and collaboration of a wide range of people living and working in the watershed. The Watershed Partnership brings people together-local residents, businesses, town officials, and state and federal representatives- to more effectively coordinate programs, tools, and resources in order to support the sustainability of the watershed and all who live, work, and play within it.

The Rhode Island Watershed Approach is not a new program. Instead, it is a new way of organizing existing programs and efforts that focuses on the power of stakeholder involvement and collaboration. The approach is

based on two premises: that organizations and people who collaborate can be more effective than groups that work alone, and that local stakeholder interests should guide environmental management and protection. The benefits of the Watershed Approach are numerous:

Benefits for Local Residents:

- Watershed partnerships build trust and enhance working relationships, providing a neutral forum where community interests can be addressed.
- Watershed partnerships help stakeholder groups target and pool together technical and financial resources.
- Through collaborative grant writing and program design, partner organizations have greater access to competitive funding sources.

Benefits for State and Federal Agencies:

- The Watershed Approach enhances government's ability to solve complex problems.
- Heightened communication fostered by watershed partnerships helps expand the scope and quality of information available for government decision-making. Consequently, federal, state and local government can more effectively coordinate and implement existing programs, and build on past efforts with creative new initiatives.

C. The Watershed Planning Process

The Woonasquatucket Watershed Action Plan is the result of a multi-stakeholder process. Over the past two years, stakeholders representing community groups, local municipalities, state and federal agencies as well as major universities have met on several occasions for the purpose of creating a coordinated action plan for the watershed. The Watershed Planning Process was sponsored and co-coordinated by the Rhode Island Department of Environmental Management, Sustainable Watersheds Office because of the Woonasquatucket's selection as a Pilot Watershed in the State's Watershed Partnership. The Woonasquatucket River Watershed Council (WRWC) co-coordinated the planning process, soliciting and compiling local input into the plan.

The technical issues of the action plan were addressed by a special committee of the Urban Rivers Team (URT). This group met every other month for over an eight month period. The URT consisted of scientist, planners and educators from state and federal agencies, universities and nonprofit organizations. Additional plan input was received through an interactive web survey devel-

The Six Goals of the Rhode Island Watershed Approach:

1. Preserve and enhance public health.
2. Preserve and enhance watershed ecosystems.
3. Promote an understanding of the connections between multiple projects and activities within watersheds.
4. Promote sustainable economic development.
5. Reduce or prevent pollutant loadings and other activities which stress the environment.
6. Encourage and involve citizens and organizations, promote stewardship, and create public/private partnerships for resource protection, management and restoration.

Learn more about the Rhode Island Watershed Partnership at:

<http://www.state.ri.us/dem/programs/bpoladm/stratpp/partnership/partners/index.htm>

oped by Melanie Rawlins, a Brown University student who worked with the WRWC throughout much of the planning process.

The Watershed Team - Members

All of the stakeholders involved in the planning process are collectively referred to as the Watershed Team. The following is a list of watershed team members:

*To become involved
with future Action
Plan revisions or to
join the
Woonasquatucket
River Watershed
Council, contact
Jenny Pereira at
455-8880*

| | |
|-----------------------|--|
| Kevin Bartlett | RIDEM – Office of Water Resources - TMDL |
| Eric Beck | RIDEM – Office of Water Resource - RIPDES |
| Maurice Bourget | Woonasquatucket River Watershed Council (WRWC) |
| Don Burns | Smithfield Conservation Commission and WRWC |
| Ted Burns | RIDEM – Office of Air Resources |
| John Campanini | Rhode Island Urban Community Forest Council |
| Gina DeMarco | Northern Rhode Island Conservation District |
| Megan DePrite | Town of Johnston, Town Planner (formerly) |
| Mathew DeStefano | RIDEM - Office of Waste Management |
| Don Driscoll | WRWC |
| Harold Ellis | RIDEM – Office of Compliance and Inspection |
| Taylor Ellis | Narragansett Bay Commission |
| Raymond Goff | Town of Glocester, Town Planner |
| Roberta Groch | City of Providence, Senior Planner |
| Charlie Hawkins | Senator Lincoln D. Chafee's Office |
| Christopher Hawkins | Town of Smithfield, Director of Planning |
| Bruce Hooke | WRWC, Providence Resident |
| Johanna Hunter | USEPA, American Heritage Rivers Program, River Navigator |
| Jean Lynch | Northern Rhode Island Conservation District, WRWC |
| Juan Mariscal | Narragansett Bay Commission |
| Eugenia Marks | Audubon Society of Rhode Island |
| Paul McElroy | WRWC, North Providence Resident |
| Galen McGovern | Rhode Island Water Resources Board (formerly) |
| Kelly Owens | RIDEM – Office of Waste Management, Brownfields Program |
| Sharon Pavignano | Narragansett Bay Commission |
| Eugene Pepper | RIDEM – Division of Agriculture |
| Jennifer Pereira | WRWC - Director |
| Leo Perrotta | Town of North Providence, Director of Planning |
| Michael Phillips | Town of North Smithfield, Town Planner |
| Frederick Presley | RIDEM - Sustainable Watersheds Office, Watershed Coordinator |
| Margherita Pryor | USEPA - Region I |
| Elizabeth Scott | RIDEM – Office of Water Resources |
| Jane Sherman | WRWC- Chairperson |
| Jean Tracey-McAreavey | Town of Johnston, Town Planner |
| Chris Turner | RIDEM- Office of Water Resources, TMDL |

Input also provided by: RIDOA-Statewide Planning, RIDOT, RIDOH, Save the Bay, Brown University and other personnel within RIDEM and EPA

II. Existing Watershed Conditions

A. Description of the Watershed¹

The Woonasquatucket River watershed is located in the north-central part of the State of Rhode Island. The basin encompasses all of the Town of Smithfield, part of the Towns of North Smithfield and Glocester, part of the Cities of North Providence and Johnston, and approximately one third of the City of Providence (**Map 1**). The Woonasquatucket River drains an area of approximately 51.9 square miles. It is about 19 miles long, dropping over 200 feet in its descent.

The Woonasquatucket River rises in the Town of North Smithfield near Primrose Pond. After flowing to the south for approximately 2.5 miles, it enters the Stillwater Reservoir (formerly known as the Woonasquatucket Reservoir). The Woonasquatucket River then flows into the Georgiaville Pond before flowing through the Villages of Esmond and Centerdale. The river flows through several more reservoirs and old mill ponds in Smithfield, North Providence, and Providence. At its confluence, the river combines with the Moshassuck River in downtown Providence (downstream of Waterplace Park), forming the Providence River.

The Woonasquatucket River watershed contains several ponds, lakes, reservoirs, and impoundments. The watershed also contains a moderate amount of wetlands, which are drained by perennial streams. The principal tributaries to the Woonasquatucket River are the Nipsachuck Swamp, Stillwater River, Nine Foot Brook, Latham Brook, Shinscot Brook, and Reaper Brook. Several of the tributaries that drain into the Stillwater Reservoir also contain reservoirs: Waterman Reservoir, Sprague Upper Reservoir, Sprague Lower Reservoir, Mountindale Reservoir, and Slack Reservoir.

Topography

The highest points in the watershed are Nipsachuck Hill and Steere Hill which both rise to elevations of approximately 550 feet above mean sea level (MSL). Nipsachuck Hill is located in the northern portion of the watershed; Steere Hill is located in the western portion of the watershed. Wolf Hill, located in the central portion of the watershed to the south of the Stillwater Reservoir, rises to 475 feet.

The Woonasquatucket River rises near Primrose Pond which is at an elevation of 272 feet above MSL. The USGS map first identifies the river at an elevation of 220

*To obtain a copy of
the newly released
Woonasquatucket
River Watershed
Asset Map,
Contact the
Woonasquatucket
River Watershed
Council at:
455-8880*

feet approximately 1,000 feet south of Primrose Pond (USGS, 1954). After 2.5 miles, the river enters Stillwater Reservoir at an elevation of 207 feet. It then descends through several reservoirs to elevations of 110 feet near the Village of Esmond and 50 feet near the Village of Dyerville. At its confluence with the Moshassuck River, the Woonasquatucket River is tidally influenced (i.e., close to sea level). The limits of tidal influence is at Rising Sun Dam with an approximate elevation of 18 feet above MSL.

Surface Water Hydrology

The Woonasquatucket River is tidally influenced up to the Rising Sun Dam, located in Olneyville near Eagle Street (1.4 miles upstream from the Providence River). Detailed tidal range information for the Woonasquatucket River could not be located. As a guide, the average tidal range in the Providence River is approximately 4.5 feet.

Tributaries

The watershed contains numerous perennial tributary streams, which flow into the Woonasquatucket River and its associated reservoir system (see Figure 2-1). In addition, some tributaries in the more urbanized areas have been culverted and incorporated into drainage systems (i.e. Pleasant Valley Parkway Stream, Route 6 tributary). Following is an overview of the main tributaries:

- *Latham Brook*: The northern portion of the watershed contains a large wetland area. This area includes the Nipsachuck Swamp, which eventually becomes Latham Brook. Latham Brook flows in a southeasterly direction into the northern portion of the Upper Stillwater Reservoir near Burlingame Road.
- *Shinscot Brook and Nine Foot Brook*: In the western portion of the watershed, Shinscot Brook flows in a southeasterly direction into Nine Foot Brook which generally flows in a southerly direction discharging into the northern portion of Waterman Reservoir.
- *Cutler Brook*: Cutler Brook also flows into Waterman Reservoir near the Village of Harmony.
- *Stillwater River*: In the southwestern portion of the watershed, the Stillwater River is a major watercourse which transports flow from Waterman Reservoir,

through West Greenville and Greenville, to the Stillwater Reservoir near Spragueville.

- *Reaper Brook:* Reaper Brook transports flow from Hawkins Pond to Mountindale Reservoir which discharges to Stillwater Reservoir.
- *Hawkins Brook:* In the eastern portion of the watershed, Hawkins Brook flows in an easterly direction discharging into the Woonasquatucket River near Esmond.
- *Harris Brook:* Harris Brook flows in a southerly direction discharging into Georgiaville Pond. *Assapumpset Brook:* In the southeastern portion of the basin, Assapumpset Brook flows from Smithfield to North Providence into Lyman Mill Pond and the Woonasquatucket River. A small tributary from Pine Hill Avenue flows to Assapumpset Brook.
- *Pleasant Valley Parkway Stream:* The headwaters is a small pond adjacent to LaSalle Academy. The stream is culverted and channelized for the majority of its length prior to discharge to Woonasquatucket. It also serves as discharge point for CSO overflow OF-049.

Impoundments

Historically, the surface water within the Woonasquatucket River has been impounded by dams for drinking water supply to local communities, for recreational purposes, and for water supply to the mills for industrial uses. There are currently 40 impoundments within the watershed identified by RIDEM/RIGIS database (Map 1). According to a 1961 USGS Water Supply Paper (Halberg *et al.*, 1961), the Woonasquatucket Reservoir Co., an association of the mills on the river, operated Mountindale Pond, Waterman Reservoir, Slack Reservoir, and the Stillwater Reservoirs to store water during high flows for release when needed by the mills downstream.

The Stillwater Reservoir is no longer in use as a water source for industrial uses. There are, however, downstream industrial users of water from the Woonasquatucket River, such as Mine Safety Appliances. Reservoirs are currently used mainly for recreational purposes (boating, bathing, fishing).

Segment Classifications

In accordance with the River Policy and Classification Plan, Rhode Island Rivers

Council has designated the following segment classifications for the Woonasquatucket River.

- Waterman Reservoir, Stillwater Reservoir, and Georgiaville Pond are suitable and used for swimming and boating. The numerous other impoundments along tributaries in the Greenville and Georgiaville areas of Smithfield (Slack, Upper and Lower Sprague, Woonasquatucket Reservoirs) are also designated as recreational and are suitable for swimming and boating. (*Recreational Open Space*)
- The Woonasquatucket River, from Georgiaville Pond to the Smithfield/North Providence line, is designated for recreational multiple use. The permitted discharge from the Smithfield Wastewater Treatment Facility enters this segment of the river just north of the North Providence town line. (*Recreational Multiple Use*)
- The Woonasquatucket River from the Smithfield/North Providence line to the dam at Doningian Park (where the river becomes tidal) is a recreational multiple use river. This area is also influenced by the permitted discharge from the Smithfield Wastewater Treatment Facility and Combined Sewer Overflows in the Providence area. It is suitable for non-contact recreational activities. Dyerville State Park is located along the Johnston/Providence segment. Resources include the development of a greenway and developments on brownfield sites. A diversity of wetlands provides habitat for urban flora and fauna with rare plant species along an adjacent railroad right-of-way. (*Recreational Multiple Use*) The Woonasquatucket River has been classified as follows:
- **Class B** from the headwaters (including Stillwater River, Stillwater Reservoir, Waterman Reservoir, Sprague and Lower Sprague, Slack Reservoir, Mountindale Reservoir, and Georgiaville Pond to Esmond Hill Drive. Class B waters are suitable for fish and wildlife habitat; primary and secondary contact recreation; and are compatible for industrial processes, cooling, hydropower, aquaculture, agriculture, irrigation and navigation. In addition, Class B waters have good aesthetic value.
- **Class B1** from Esmond Hill Drive in Smithfield to CSO located at Glenbridge Avenue in Providence. Class B1 waters have the same designated uses as Class B waters. However, the primary contact recreation may be impacted by pathogens from approved wastewater facilities (i.e., Smithfield WWTF).
- **Class B1{a}** from Glenbridge Avenue to its confluence with the Moshassuck

River. Class B1{a} waters have the same designated uses as Class B1 waters. However, these waters have a partial use designation due to impacts from combined sewer overflows (CSOs). Partial use for CSOs is defined as follows (RIDEM, 1997, p.12):

“These waters will likely be impacted by combined sewer overflows in accordance with approved CSO Facilities Plans and in compliance with rule 19.E.1 of these regulations and the Rhode Island CSO Policy. Therefore, primary contact recreational activities, shellfishing uses and wildlife habitat will likely be restricted.”

RIDEM has not specifically classified any waterbodies in the watershed as **Class A**. However, some unclassified waterbodies may be considered Class A in accordance with Water Quality Regulations. The Regulations state that unclassified waterbodies hydrologically connected by surface waters upstream of Class B and B1 waters are considered Class B. Waterbodies not hydrologically connected by surface waters and not specifically classified are considered Class A (RIDEM, 1997).

The State’s 1998 303(d) List of Impaired Waters cite the following water quality concerns in the Woonasquatucket River and its tributaries: pathogens, PCBs, heavy metals (such as copper, lead, and mercury), and biodiversity impacts. Presented below is a list of waterbodies within the Woonasquatucket River basin identified in the 303(d) list:

- Latham Brook - Biodiversity impacts;
- Woonasquatucket River - Biodiversity impacts, pathogens, PCBs, dioxin, metals (Cu, Pb, Hg); and
- Nine Foot Brook - Biodiversity impacts

B. Watershed History

Natural History³

The bedrock under the hills of the Woonasquatucket watershed formed more than 600 million years ago when the African continent pushed volcanic islands of the old Atlantic up against the North American continent. Lower in the watershed, in the Johnston-Providence area, the bedrock, only 300 million years old, formed during the “coal age” when giant ferns and cycads covered all of Narragansett Bay.

For more information about water quality throughout the state go to the following websites:

[http://
www.state.ri.us/
dem/pubs/305b/
index.htm](http://www.state.ri.us/dem/pubs/305b/index.htm)

[http://
www.state.ri.us/
dem/pubs/303d/
index.htm](http://www.state.ri.us/dem/pubs/303d/index.htm)

*To trace the history
of a river . . . is to
trace the history of
the soul, the history
of the mind de-
scending and
arising in the body.*

Gretel Ehrlich

Fast forward to the last ice age, a mere 10 to 40 thousand years ago when the tilt of the earth and the earth's path around the sun produced year-round low temperatures that did not melt snow in the northern regions. As this continental glacier melted back across Rhode Island, first sand and gravel were deposited in the ancient river valley, and then the meltwater from the glacier cut a channel that still flows today as the Woonasquatucket River.

Over the last 10 to 12 thousand years, lichens then wildflowers and shrubs have grown and contributed to the development of topsoil, in turn supporting cone-bearing trees and then hardwoods. Native Americans migrated here to forage for the abundant berries, shellfish, and small game. Europeans arrived on Rhode Island shores in 1636, and the land between the Moshassuck and the Woonasquatucket was given to Roger Williams in a treaty.

Although European mill industries developed along the river, dammed its free flow and dumped wastes into the water, even the urban part of the river still displays amazing wildlife. No longer do salmon or herring swim against the current from the ocean to spawn in the Woonasquatucket or its tributaries, but elver, young eels, manage to migrate from the Atlantic's Sargasso Sea, up Narragansett Bay, and up the impoundments as far as the river and its tributaries in Johnston and North Providence.

Other fish – trout, bluegills, pumpkinseeds, catfish and suckers — live in the lower river where painted turtles sun on its banks. Mute swans, mallards, and hooded mergansers cruise the waters looking for food. Gulls poke along bars in the lower river at ebb tide, and raccoons forage the embankments.

Red maples predominate the riverbank into downtown Providence, and orchid-like arrow arum and violet vervain stake a claim between the factories of Olneyville. The remains of the floodplain at Donigian Park grow box elder trees.

Birds that spend our winters in Latin America nest along the Woonasquatucket in warmer months. Yellow-throated warblers, kingbirds, orioles and flycatchers have found suitable habitat to raise families in Providence and further upstream pockets of forested swampland offer abundant nesting areas. .

Just along the Providence-Johnston border red-tailed hawks nest and hunt the river margin. Great Blue Heron forage the Dyerville area. Further out in the watershed red-shouldered and broad-winged hawks have nested. Great horned,

barred, and screech owls find homes among the hardwoods covering the hills.

Fox, coyote, rabbits, otters, shrews, and gray, red, and flying squirrels claim the name mammal along with the human residents of the watershed. Even bear and moose have ventured here, and white-tailed deer proliferate.

The Woonasquatucket watershed hosts a rich diversity of animal and plant life, a web of life among themselves as well as a delight to human residents and visitors.

Modern History

The recorded history of the Woonasquatucket River begins with the accounts of Roger Williams' first days in what is now Providence, RI. Roger Williams and his followers were banished from the Colony of Massachusetts and came to "the confluence of the rivers Woonasquatucket and Mashassuck, where they landed near a great spring of sweet water". It was here that the settlement of Providence Plantations was started. Williams would later write:

"Be it known to all men by these presents, That I, Roger Williams of the Towne of Providence in the Narragansett Bay in New England, having in the yeare, one Thousand Six hundred thirty Foure And in the yeare one Thousand Six hundred and Thirty Five, had severall Treatyes with Counancusse, And Maintenome, the Two cheife Sachims of the Narragansett: And in the End, purchased of them the Lands and Meddowes upon the Two Fresh Rivers called Moshosick And Wanasquattuckett."

Roger Williams, 1639

The Woonasquatucket River provided well for the early colonist. Fresh, clean water, fish and hay from the meadows were all in abundance. The River was the center of activity. In the centuries to follow the important characteristics of the River would switch from its natural assets to its potential for power. The birth of the industrial revolution quickly spread from the Blackstone River to the Woonasquatucket. The first textile mills began to appear along the River's banks in the early nineteenth century. The River's narrow width and steep descent was ideal for water power generation.

In 1822, **Zachariah Allen, Jr.** "was busy personally building a new mill on the Woonasquatucket river in North Providence and laying out a model village for its

workers he named Allendale. To assure a constant supply of water power for the mill, he obtained a charter giving him and others permission to construct “reservoirs for retaining flood-waters for use during the droughts of summer.” According to the Biographical Cyclopedia of Rhode Island this was “the first charter in the United States pursuant to systematic plans for making reservoirs for hydraulic purposes.”² Soon the lower reaches of the Woonasquatucket were lined with mills and factories. Some of the nation’s largest industrial manufacturers made their fortune along her banks. The River provided power for the mills and the necessary water supply for the later steam operations. The River also received the waste by-products, sewage, and polluted runoff that accompanied the industrial success of the region. The once “sweet waters” that Roger Williams had chosen to settle upon had become some of the more polluted waters in the nation.

C. Watershed Team Accomplishments

Recent history has painted the picture of a river on the rebound. In 1998 President Clinton designated the Woonasquatucket River an American Heritage River one of only fourteen in the nation. The Rhode Island Watershed Partnership selected the Woonasquatucket River as one of its two pilot watersheds. In June of 2001, the Rhode Island Rivers Council designated the Woonasquatucket River Watershed Council (WRWC) as the official watershed organization. On the ground several key efforts are underway to improve the health of watershed. Many of the activities now underway are the direct result of the efforts of the Woonasquatucket Watershed Team (WWT) or its members. The Woonasquatucket Watershed Team consists of members of the WRWC, as well as representatives of state agencies (RIDEM, RIDOA, RIDOH, RIDOT and NBC (quasi-governmental agency)), federal agencies (EPA, NRCS, USGS and USDA-Forest Service), non-governmental organizations (Audubon Society of Rhode Island, Northern Rhode Island Conservation District, Land Trust....?? Historic Commissions..?? Others??) and concerned citizens.

The Woonasquatucket River Watershed Council was officially established in 1998 by a group of residents from the six watershed communities who met to identify critical issues for the Woonasquatucket River. Since its inception, this group has undertaken activities and projects to revitalize the Woonasquatucket, and has become an important local partner in state, federal, and municipal efforts in the watershed.

The following represents some of the highlights achieved by the

Woonasquatucket Watershed Team and its members:

Woonasquatucket River Watershed Activity Highlights 2000 - 2001

Project: Freshwater Wetland Restoration Strategy

Lead: URI/DEM

Funding: EPA

Amount:

Description: Watershed-based wetland restoration strategy for Rhode Island. Phase 1 Pilot initiated in the Woonasquatucket and Queens Watersheds. Phase 2 will be in Woonasquatucket only. Will identify and rank wetland restoration sites throughout the watershed.

Project: Riparian Forest Buffer Development

Lead: DEM/Woonasquatucket River Watershed Council

Funding: US Forest Service

Amount: \$67,000.00

Description: Watershed-based riparian forest buffer development strategy. Will identify and rank potential sites and initiate one project within the watershed. Includes educational/out-reach components. Draft report complete. Demonstration site under design (Riverside Mills).

Project: Riparian Buffer Restoration Project

Lead: WRWC

Funding: National Fish & Wildlife Foundation (Five-Star grant)

Amount: \$11,500

Description: Funds will be used for plants and materials to help restore the riparian buffer at the Riverside Mills site.

Project: Watershed Signs

Lead: WRWC

Funding: RI Foundation

Amount: \$7,500

Description: The Council is working with Town Planners to produce and post watershed signs to promote watershed awareness.

Project: Woonasquatucket River Greenway Project

Lead: The Providence Plan

Funding: EPA

Description: 5.7 mile walk and bike trail system along the Greenway

from Manton Pond to Waterplace Park. Links Manton, Hartford, Olneyville, Valley, and Smith Hill with Downtown.

Project: Woonasquatucket River Greenway Project
- Lincoln Lace and Braid Brownfields cleanup

Lead: DEM/EPA/City of Providence

Funding: EPA/DEM

Description: Clean-up proceeding. All UST's and buildings have been removed from the site. Monitoring is ongoing, some soils remediation will need to be completed.

Project: Woonasquatucket River Greenway Project
- Lincoln Lace and Braid Wetland Restoration Project

Lead: City of Providence

Funding: EPA (319 grant)

Description: Removal of the sluiceway and creation of a valuable functioning wetland. Project delayed pending final monitoring report results.

Project: Riparian Wetland Buffer Project

Lead: City of Providence

Funding: EPA (104(b)(3) grant)

Description: Develop plan for restoration of a wetlands buffer along the banks of the Woonasquatucket River. Either Lincoln Lace and Braid or Riverside Mills are likely to be the location.

Project: Woonasquatucket River Greenway Project
- Riverside Mills Brownfields clean-up

Lead: DEM/EPA/City of Providence

Funding: EPA/DEM/Forest Service/NFWF

Description: UST removal completed. Concrete storage vault pump out, cleaned and back filled with sand. Funding in place for soil remediation and other clean-up efforts. Riparian and wetland restoration design underway.

Project: Northwest Bike Trail

Lead: DOT/DEM

Funding: USFHA/RIDOT

Description: Baseline report complete. DOT working with DEM-Waste and City of Providence to install section of the Bike Path in out of order to facilitate brownfields and restoration efforts.

Project: Centerdale Manor/Woonasquatucket Superfund designation

Lead: EPA/DEM

Funding: Federal Superfund Clean-up (EPA)

Description: Area of the Woonasquatucket River from the Route 44 overpass to and including the Allendale Dam was designated as a NPL site. This will provide the funding necessary to repair the dam, which has been breached. Dam restoration to begin 08/01 with completion scheduled for 12/01. Initial soil remediation to begin in the spring of 2002.

Project: Stillwater Dam Repair

Lead: RIDEM P&D

Funding: State

Description: Repair/reconstruction of the Stillwater dam (Potential for fish ladder).

Project: Greenspace Protection and Implementation Strategy

Lead: DEM/ Watershed Municipalities

Funding: US Forest Service grant

Amount: \$100,000.00

Description: Development and implementation of a watershed-based Greenspace protection/restoration strategy for each municipality. Scheduled to start in the fall.

Project: Woonasquatucket River Watershed Asset Map

Lead: WRWC/EPA/DEM

*To obtain a copy of
the newly released
Woonasquatucket
River Watershed
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Council at:
455-8880*

Funding: EPA funding

Amount: \$10,000.00

Description: Development and production of a watershed map highlighting cultural, historic, recreational and natural assets of the watershed. Completed August 2001.

Project: Restoration Database and Website Project

Lead: DEM/ WRWC

Funding: Potential 319 funding

Amount: \$10,000.00

Description: Follow-up to the riparian and wetland identification projects. Creation of a searchable database linked to GIS mapping capabilities and web based. Includes detailed landowner data for all sites.

Project: Smithfield DPW Site Stormwater Control project

Lead: Town of Smithfield

Funding: Potential 319 funding

Amount: \$75,000.00

Description: Follow-up to the salt shed project funded last year, this project will result in the installation of stormwater BMP's as well as a small riparian restoration.

¹ Contents of this section taken from Water Quality Characterization Report for the Woonasquatucket River, Berger, 2000

² ©1998 Edward A. Cooper

³ Taken from the 2001-Woonasquatucket River Watershed Asset Map-
Natural History of the Woonasquatucket Watershed, by Eugenia Marks

III. Action Plan

This section contains the results of the action planning process. What follows are the Goals, Issues, and Objectives as identified by the Watershed Team, followed by Strategies and Activities to attain the stated objectives. The individual actions necessary to complete each activity are identified in the Woonasquatucket River Watershed Action List, which is included in the appendix.

TOPIC: Water Quality

GOAL:

Clean and Plentiful Water. Fishable Swimmable surface water bodies.

ISSUE I:

Much of the Woonasquatucket River and its tributaries are impaired due to biodiversity impacts, pathogens, PCBs, dioxin, and metals (Cu, Pb, Hg).

Objective 1:

Restore impaired sections of the Woonasquatucket River and its tributaries.

Strategy 1.1:

Complete the water quality characterization of the river and its tributaries and identify opportunities to abate pollution.

Activities:

- 1.1.1 Conduct additional monitoring and assessment identified as data gaps by the 9/2000 Water Quality Characterization report.
- 1.1.2 Explore sources of non-permitted dry weather discharges (non-CSO) to the river.
- 1.1.3 Begin development of Best Management Practices (BMPs) for controlling stormwater runoff.
- 1.1.4 Ensure that wastewater facilities are operating properly.
- 1.1.5 Ensure that stormwater controls are installed at auto junkyards along the river.
- 1.1.6 Continue efforts on CSO abatement.

I started out thinking of America as highways and state lines. As I got to know it better, I began to think of it as rivers. Most of what I love about the country is a gift of the rivers. . . . America is a great story, and there is a river on every page of it.

Charles Kuralt, *On the Road With Charles Kuralt*

- 1.1.7 Develop bioassessments for Latham and Nine-foot Brooks.

Strategy 1.2:

Increase public awareness on the impact of human activity within the watershed and how they can assist in pollution reduction measures.

Activities:

- 1.2.1 Produce and distribute watershed awareness outreach materials.
- 1.2.2 Develop and erect watershed signs along major roadways

Strategy 1.3

Protect and restore riparian buffer areas and wetlands throughout the watershed.

Activities:

- 1.3.1 Complete riparian forest buffer restoration site identification process.
- 1.3.2 Complete URI wetland restoration study
- 1.3.3 Develop riparian buffer implementation plan for watershed.
- 1.3.4 Step up enforcement actions on violators of wetland and waste regulations.
- 1.3.5 Insist that new developments result in significant environmental improvements in areas that are currently degraded.

Strategy 1.4

Provide assistance to municipalities for stormwater issues, particularly Phase II.

Activities:

- 1.4.1 Provide technical and financial assistance for the creation of stormwater management plans.
- 1.4.2 Provide grant writing assistance for restoration and retrofit opportunities.

Issue II:

Water use and availability has not been characterized in the watershed

Objective 2:

Current and projected water use requirements are known and adequate water supply is available.

Strategy 2.1:

Develop water use/availability characterization report for the watershed.

Activities:

- 2.1.1 Complete water use/availability report
- 2.1.2 Develop water use management and conservation plans for each community.

TOPIC: Public and Environmental Health

GOAL:

A healthy safe environment for all watershed residents

ISSUE I:

Poor air and water quality poses a health risk in some communities of the watershed.

Objective 3:

Safe water and air quality throughout watershed

Strategy 3.1:

Characterize air quality within problem areas of the watershed and identify opportunities to abate pollution.

Activities:

- 3.1.1 Conduct air quality monitoring in Olneyville area for 1 year period starting in June 2002.

- 3.1.2 Survey businesses in Olneyville to determine sources that perform metal plating and/or use volatile organic compounds.

Strategy 3.2:

Increase public awareness of known and assumed environmental health risks.

Activities:

- 3.2.1 Expand Do's and Don'ts program for other watershed Communities
- 3.2.2 Develop other outreach materials in multiple languages
- 3.2.3 Expand outreach efforts regarding the impacts of lead to watershed residents

ISSUE II:

The actual risk of fish consumption is not known in the watershed.

Objective 4:

Water bodies within the watershed have regular fish tissue sampling and steps taken to avoid the risk to the population.

Strategy 4.1:

Acquire data and information to support funding fish tissue sampling in the Watershed.

TOPIC: Public and Environmental Health

Activities:

- 4.1.1 Develop and implement fish consumption survey and outreach program.
- 4.1.2 Use data gathered to gain support for fish tissue

sampling program (This is a statewide initiative).

Issue III:

Environmental Equity is a problem in the watershed's urban communities.

Objective 5:

Environmental policy and enforcement implemented fairly in urban as well as rural areas.

Strategy 5.1:

Establish Urban Environmental Task Force to address whether or not current environmental policy/regulations (Water Quality, Wetlands, and Waste Management) and implementation adequately and equitably deals with Urban Environmental Issues.

Activities:

5.1.1 Convene task force to assess current environmental policies and regulations in urban areas.

TOPIC: Natural, Cultural and Recreational Resources

GOAL:

Protect and restore natural, cultural and recreational resources of importance to the communities within the watershed.

ISSUE I:

The Woonasquatucket River Watershed faces increased development in its suburban and rural communities as well as increased redevelopment in its more urban areas. This development pressure results in the continued loss of important natural, cultural and recreational places.

Objective 6:

Focus activities, funding and resources to protect, preserve and restore important natural, cultural and recreational places.

Strategy 6.1:

Target land acquisition efforts to protect, preserve and restore critical natural habitat.

Activities:

- 6.1.1 Expand criteria for Open Space Bond grants to reward sites included in Greenspace Plans and Watershed Action Plans and those sites that are physically connected to other important natural resources.
- 6.1.2 Assist municipalities and local land trusts in developing criteria and process for evaluating potential sites for open space protection.

Strategy 6.2:

Assist each community to identify and prioritize important natural, cultural and recreational resources for protection.

Activities:

- 6.2.1 Develop Greenspace Implementation Strategies in each community
- 6.2.2 Identify regional linkages between protected greenspaces (across municipal boundaries).
- 6.2.3 Identify all farms within the watershed communities and prioritize them for preservation.
- 6.2.4 Plan and implement Heritage River, site and building markers for the watershed.

Strategy 6.3:

Protect and restore natural habitats including riparian buffers, wetlands and anadromous fish runs throughout the watershed.

Activities:

- 6.3.1 Complete riparian forest buffer restoration site identification process.
- 6.3.2 Complete URI wetland restoration study
- 6.3.3 Develop grant funding guide to complement riparian site database.
- 6.3.4 Secure funding to complete 3 riparian restoration projects by 2004.

- 6.3.5 Develop riparian buffer implementation plan for watershed.
- 6.3.6 Step up enforcement actions on violators of wetland regulations.
- 6.3.7 Take advantage of planned dam repair/replacements to accommodate fish passage.

Strategy 6.4:

Develop the capacity of communities to preserve and reuse historic structures such as mills.

Activities:

- 6.4.1 Complete an inventory of endangered historic properties and buildings.
- 6.4.2 Work with local preservation groups to suggest potential reuse.
- 6.4.3 Compile a database of examples where historic mills have been successfully reused while maintaining historic and cultural importance.

Strategy 6.5:

Construct North West Bike Trail/Woonasquatucket River Greenway along the River and connect to destinations.

Activities:

- 6.5.1 Continue efforts to construct North West Bike Trail/Woonasquatucket River Greenway segments at Lincoln Lane and Braid and Riverside Mills
- 6.5.2 Work with Town of Johnston to move proposed North West Bike Trail/Woonasquatucket River Greenway off road and along the river as much as possible (old Railway bed)
- 6.5.3 Planning for linking the proposed North West Bike Trail/Woonasquatucket River Greenway to the North South Trail and the Blackstone

Topic:

Planning

GOAL:

Communities will have the capacity to effectively plan for growth in a way that minimizes negative impacts on the environment and community character, and contributes to a sustainable economy.

ISSUE I:

Some communities in the watershed lack the tools and resources needed to effectively plan for growth.

Objective 7:

Provide watershed communities with the information, tools, training and financial resources necessary to effectively plan for and manage growth in a way that reflects the community's needs and goals while minimizing impacts to the environment and community character.

Strategy 7.1:

Provide local boards and commissions with the appropriate tools and model ordinances that reflect community goals.

Activities:

- 7.1.1 Work with communities to develop greenspace plans.
- 7.1.2 Assist communities with grant submissions (open space, recreational, water quality etc.).
- 7.1.3 Provide growth planning training and workshops for boards and commissions.
- 7.1.4 Develop population growth analysis which require provisions for residential expansion within the context of watershed issues.
- 7.1.5 Increase the capacity of local planners, boards and commissions by assisting them in acquiring hardware and software to take advantage of current technology (GIS, internet etc.).
- 7.1.6 Assist communities with Greenway overlay zoning advice

TOPIC: Remediation and Reuse of Contaminated

Sites

GOAL:

Watershed communities will be free from unacceptable human health and ecological risks from exposure to hazardous substances and other potentially harmful agents.

ISSUE I:

Due in part to the rich industrial heritage of the watershed, several contaminated sites are present within the watershed which remain a risk to human and ecological health as well as being a barrier to economic development.

“A river is the report card for its watershed.”

Alan Levere,
CT DEP

Objective 8:

Remediate and where appropriate reuse contaminated sites within the watershed.

Strategy 8.1:

Continue ongoing remediation efforts and increase efforts to identify and prioritize other sites.

Activities:

- 8.1.1 Identify and prioritize all brownfield sites for remediation.
- 8.1.2 Assist communities in remediation and marketing of brownfields.
- 8.1.3 Work with communities to integrate remedial sites into larger open space and recreation efforts.
- 8.1.4 Continue to monitor and take active participation role in the Centredale Manor Superfund Site.

Strategy 8.2:

Clean-up solid waste disposal sites in the watershed (including all tire piles and improve regulations and enforcement actions to prevent further illegal dumping.

Activities:

- 8.2.1 Complete Johnston tire pile clean-up.

- 8.2.2 Use existing authority to mandate clean-ups of private property.
- 8.2.3 Review and improve existing recycling programs for tires and batteries.

TOPIC: Sustainable Economic Development

GOAL:

The Woonasquatucket River once again will be the centerpiece of a thriving and sustainable economy that takes advantage of the river's many attributes while respecting the ecology of the river and its surrounding natural environments, as well as the cultural and historic heritage of the communities.

ISSUE I:

The Woonasquatucket Watershed communities have proud history of mills and other river-based industry that dates back to the birth of the industrial revolution. The river has gone from a time when the river was the focus of economic strength to a time when the river has been all but forgotten in some communities.

Objective 9:

Build on the recent economic successes that have highlighted the river. Integrate environmental restoration and remediation opportunities with economic development projects. Focus on development projects that enhance environmental quality while preserving historic character and creating strong economic development.

Strategy 9.1:

Assist urban communities to develop and support development practices that enhance the environmental quality of the river while preserving the cultural and historic characteristics of the neighborhoods.

Activities:

- 9.1.1 Develop an urban design manual that clearly outlines methods communities can use to meet the objective.
- 9.1.2 Give incentives to developers who design projects, which adhere to the recommended standards of the design manual.
- 9.1.3 Assist communities in marketing brownfields and other environmentally challenged sites.
- 9.1.4 Develop ways to protect historic mills within the watershed and put them into productive reuse.
- 9.1.5 Help urban communities identify economic reinvestment opportunities.
- 9.1.6 Help communities to identify an economic identity for the watershed, unifying economic initiatives while promoting watershed awareness.
- 9.1.7 Assist the Olneyville area in Providence, Railroad Avenue area in Johnston, and the Centredale area in North Providence with site specific economic development planning.

TOPIC: Flood Protection and Dam Repair/Removal**GOAL:**

All necessary dams are safe and flood prone areas addressed. Dam removal is carried out where ever it can be done to alleviate flooding, restore natural in stream habitat and improve recreational opportunities.

ISSUE I:

Many dams in the watershed are need inspections and or repairs to improve safety and function.

Objective 10:

Develop a long range dam repair and removal plan for the purpose of dam safety, flood control, habitat restoration, and recreation.

Strategy 10.1:

Complete a dam characterization for all Woonasquatucket Watershed Dams. Make recommendations for repair or removal.

Activities:

- 10.1.1 Identify and pursue grant opportunities to complete a dam characterization report and make recommendations for removal or repair.
- 10.1.2 Identify funding opportunities for dam projects.

ISSUE II:

Flooding is a problem in certain areas of the watershed.

Objective 11:

Identify and correct flooding problems in the watershed.

Strategy 11.1:

Protect and restore natyral drainage and flood control systems (i.e. wetland and riparian restorations, stream and river reclamation and maintenance, daylighting) in the watershed.

Activities:

- 11.1.1 Complete a flood study of the river and its tributaries
- 11.1.2 Continue efforts of riparian and wetland restorations for habitat and flood storage.

TOPIC: Watershed Organization Capacity

GOAL:

The Woonasquatucket River Watershed Council is a thriving group with a broad constituency and regular funding to support the staffing and administrative needs, now and into the future. The Council and the issues they are promoting are recognized throughout the watershed.

Issue I:

The Woonasquatucket River Watershed Council is a young but strong community-based organization working to revitalize the environment,

historical and economic resources of the watershed. Currently they are relying on competitive grants to fund personnel, administrative and outreach cost. This takes a great deal of time and efforts away from their mission and outreach efforts.

Objective 12:

Provide the WRWC with the sustained financial capacity to effectively operate and achieve their goals.

Strategy 12.1:

Seek legislative funding for designated Watershed Councils

Activities:

- 12.1.1 Work with state legislators and the Rivers Council to fund designated watershed councils.
- 12.1.2 Include watershed organizations in state and federal grant opportunities.
- 12.1.3 Develop consistent foundation funding vehicle for watershed organizations.

Objective 13:

Develop and implement consistent watershed outreach effort.

Strategy 13.1

Provide watershed outreach materials and funding to the council to build constituency and support for their goals.

Activities:

- 13.1.1 Include outreach components to grant projects within the watershed.
- 13.1.2 Provide funding for printing and design of outreach materials.
- 13.1.3 Design and erect signage throughout the watershed for streams and other water bodies which bring attention to the watershed.

Topic: Transportation

GOAL:

An integrated network of accessible and environmentally responsible modes of transportation operates throughout the watershed.

ISSUE I:

Current transportation projects are not well coordinated environmental and restoration efforts.

Objective 14:

Stakeholders identify opportunities for integrating environmental enhancement /restoration projects with transportation projects.

Strategy 14.1:

Coordinate public works projects with enhancement and restoration efforts.

Activities:

- 14.1.1 Continue current design remediation efforts at Lincoln Lake and Braid and Riverside Mills sites with bike path construction.
- 14.1.2 Publicize road design schedule to allow for coordination with other local projects and potential restoration efforts.
- 14.1.3 Continue efforts to construct North West Bike Trail/ Woonasquatucket River Greenway segments at Lincoln Lake and Riverside Mills (see also Strategy 6.5, activity 6.5.1)

ISSUE II:

Public transportation does not adequately address resident's needs.

Objective 15:

Transportation needs of the watershed community are understood and efforts to address those needs are underway.

Strategy 15.1:

Evaluate current transportation options

Activities:

- 15.1.1 Conduct a needs analysis of the transportation needs of the watershed Communities, and potential for alternative modes of transportation.
- 15.1.2 Improve access to public transportation

ISSUE III:

Traffic Congestion in Olneyville and Routes 6/10 merge Could have a negative impact on air quality and economic development in the area

Objective 16:

Traffic congestion problems are eliminated and new linkages have been established between communities.

Strategy 16.1:

Engage in traffic calming and feasibility studies to address key transportation related issues.

Activities:

- 16.1.1 Conduct traffic calming study along Route 6 in Providence to its merge with Route 10.
- 16.1.2 Study feasibility of north-south link by road and bicycle path in Providence to link Olneyville and Elmwood.

Topic: Water Quality**Objective 1: Restore impaired sections of the Woonasquatucket River and its tributaries.****Strategy 1.1: Complete the water quality characterization of the river and its tributaries and identify opportunities to abate pollution**

| Activity | Action | Partners | Funding Source | Time period | Status | Focus Area | Contact Person | Contact Phone | Contact Email |
|----------|---|--|--------------------------|---|--|---|----------------------|----------------|---------------------------|
| 1.1.1 | A. Conduct supplemental wet and dry weather monitoring | RIDEM-OWR/NBC | EPA grant to NBC, NBC-OF | 6/30/2002 | Monitoring plans are complete. Sampling is scheduled to start 6/01/01 | Lower part of main stem and tributaries | Kevin Bartlett-RIDEM | 222-4700 x7163 | kbartlett@dem.state.ri.us |
| 1.1.1 | B. Conduct sediment sampling in the upper portion of the river (above Allendale Pond) to identify PCB and Dioxin sources and characterize contamination | RIDEM-OWM-OWR/EPA/ USACOE | | 6/30/2003 | Monitoring program will be developed in 2002 | Upper portion of the river (above Allendale Pond) | Kevin Bartlett-RIDEM | 222-4700 x7163 | kbartlett@dem.state.ri.us |
| 1.1.1 | C. Complete inventory of junkyards, jewelry making and industrial use pretreatment systems and industrial | RIDEM-OWR-OMS | RIDEM-OF, NBC-OF | | Junkyard Inventory Complete, Others Ongoing | | Eric Beck-RIDEM | 222-4700 x7202 | ebeck@dem.state.ri.us |
| 1.1.2 | A. Trace the sources of high priority dry weather inputs identified in pipe recon. | RIDEM-OCI, NBC | RIDEM-OF, NBC-OF | Remaining pipe was referred to OCI 13 DEC 00. | 2 sources were identified. 1 has been eliminated the other was referred to | Lower part of main stem and tributaries | Kevin Bartlett-RIDEM | 222-4700 x7163 | kbartlett@dem.state.ri.us |
| 1.1.2 | B. Remediation of identified non-permitted dry weather flows | RIDEM-OCI/NBC/Municipalities | RIDEM-OF, NBC-OF | 1 complete (pipe #145) 1 was referred to OCI 13 DEC 00 | Awaiting dye study by OCI to identify source | Lower part of main stem and tributaries | | | |
| 1.1.2 | C. Strategy to address non-CSO wet weather discharges to river. | RIDEM-OWR,OCI/Municipalities/RIDOT/NBC | | 6/30/2002 | Pending completion of 2001 wet weather monitoring | | Kevin Bartlett-RIDEM | 222-4700 x7163 | kbartlett@dem.state.ri.us |
| 1.1.3 | A. Develop and implement retrofit plan for RIDOT outfall W6 | RIDOT, RIDEM | RIDOT | | | Project Site | | | |
| 1.1.4 | A. Inspections of Smithfield WWTF and five of the minor RIPDES discharges to the river. | RIDEM-OWR | RIDEM - OF | Ongoing | Ongoing | | Eric Beck-RIDEM | 222-4700 x7202 | ebeck@dem.state.ri.us |
| 1.1.4 | B. Prioritize minor generators to be inspected based upon wet weather source sampling results. | RIDEM-OWR | | 6/30/2002 | Pending completion of 2001 wet weather monitoring | | | | |
| 1.1.5 | A. Complete a list of auto junkyards within the watershed and determine which of these have RIPDES permits | RIDEM-OWR | RIDEM - OF | | Complete | Entire Watershed | Eric Beck-RIDEM | 222-4700 x7202 | ebeck@dem.state.ri.us |
| 1.1.5 | B. Inspection of permitted junkyards for compliance. | RIDEM-OWR,OCI | | | | | | | |
| 1.1.6 | A. Continue weekly coliform sampling in CSO areas. | NBC | NBC-OF | Ongoing | Ongoing | Lower part of main stem and tributaries | | | |
| 1.1.6 | B. Install automatic sampling stations at 5 locations. | NBC | EPA grant to NBC | | Underway | Lower part of main stem and tributaries | | | |
| 1.1.7 | A. Develop bioassessment strategy for Nine-foot, and Latham Brooks | ASRI, RIDEM-OWR | Audubon | * 9-Foot Brook - 12/01/2001 *Latham Brook - 12/1/02 | 9-Foot Brook assessment is ongoing | Nine-foot, and Latham Brooks | Kevin Bartlett-RIDEM | 222-4700 x7163 | kbartlett@dem.state.ri.us |

| Activity | Action | Partners | Funding Source | Time period | Status | Focus Area | Contact Person | Contact Phone | Contact Email |
|--|---|---|---|-----------------|------------------------------------|------------------|-----------------|--------------------|--------------------------|
| 1.2.1 | A. Distribute Watershed maps and outreach materials (watershed placemats and bookmarks) throughout the watershed. | RIDEM-SWO/ ASRI/ WRWC/NBC | Various Sources | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 x 4417 | fpresley@dem.state.ri.us |
| 1.2.1 | B. Assist watershed council by funding outreach events and material | RIDEM-SWO/EPA/NBC/Municipalities/Local Business Community | RIDEM-SWO/EPA/NBC/Municipalities/Local Business Community | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 x 4417 | fpresley@dem.state.ri.us |
| 1.2.2 | A. Develop designs for watershed signs. | WRWC/ RIDOT/RIDEM | WRWC/ RIDOT/RIDEM/RI Foundation | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 x 4417 | fpresley@dem.state.ri.us |
| 1.2.2 | B. Secure funding to produce and erect watershed signs. | WRWC/RIDOT/RIDEM | WRWC/ RIDOT/RIDEM/RI Foundation | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 x 4417 | fpresley@dem.state.ri.us |
| Strategy 1.3: Protect and restore riparian buffer areas and wetlands throughout the watershed. | | | | | | | | | |
| 1.3.1 | A. Prioritize identified potential restoration sites by community and function. | RIDEM-SWO/Consultant | USDA,FS grant | By October 2001 | 85% complete | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 1.3.1 | B. Develop grant funding guide to complement riparian site database. | RIDEM-SWO | RIDEM | By Jan 2002 | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 1.3.2 | Expand Wetland Restoration project to entire watershed | RIDEM-OWR/EPA/URI | EPA | By Jan 2002 | Phase 1 Complete, Phase 2 underway | Entire Watershed | Carol Murphy | 222-4700 x7208 | cmurphy@dem.state.ri.us |
| 1.3.3 | Apply for grant funds to develop riparian buffer development | RIDEM-SWO/WRWC | Various | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 1.3.4 | Increase enforcement actions on violations in watershed. | RIDEM-OCI | RIDEM | Ongoing | Ongoing | Statewide | Hank Ellis | 222-4700 x7401 | hellis@dem.state.ri.us |
| 1.3.5 | Work with communities implement strict environmental regulations in critical areas. | RIDEM-SWO/OCI/OWR/WRWC | | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| Strategy 1.4: Provide assistance to municipalities for stormwater issue, particularly phase II implementation. | | | | | | | | | |
| 1.4.1 | Provide funding through 319 grants for municipal Phase II stormwater plans | RIDEM-OWR/EPA | 319 grants | By 2003 | Development Stage | Entire Watershed | Eric Beck-RIDEM | 222-4700 x7202 | ebeck@dem.state.ri.us |
| 1.4.2 | Assist communities by preparing potential grant submissions in advance of expected RFP's | RIDEM-SWO/WRWC | RIDEM-OF/WRWC-OF | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| Objective 2: Current and projected water use requirements are known and adequate water supply is available. | | | | | | | | | |
| Strategy 2.1: Develop water use/availability characterization report for the watershed. | | | | | | | | | |
| 2.1.1 | A. Conduct water use/availability study | RIWRB, USGS | RIWRB | By 2002 | | Entire Watershed | | | |
| 2.1.1 | B. Provide data to each community | RIWRB, USGS | RIWRB | By 2002 | | Entire Watershed | | | |
| 2.1.1 | C. Project future drinking water needs in context of population growth projection/build out analysis and available water supply | RIWRB/RIDOA/RIDOH/NBC | | | | | | | |
| 2.1.2 | A. Based upon information from tasks in 2.1.1, develop water use conservation plans for each community | Municipalities, RIWRB, RIDOA, NBC | | | | | | | |
| 2.1.2 | B. Develop drought plans for each community | RIWRB, Municipalities, RIDOA | | | | | | | |
| TOPIC: Public and Environmental Health | | | | | | | | | |
| Objective 3: Safe water and air quality throughout the watershed. | | | | | | | | | |
| Strategy 3.1: Characterize air quality within problem areas of the watershed and identify opportunities to abate pollution. | | | | | | | | | |

| Activity | Action | Partners | Funding Source | Time period | Status | Focus Area | Contact Person | Contact Phone | Contact Email |
|--|--|--|----------------------------------|-------------------------|-----------------------------------|------------------|----------------|--------------------|-----------------------------|
| 3.1.1 | Conduct air quality monitoring in Olneyville area for 1 year period starting in June 2002. | RIDEM-OAR/EPA | EPA- Air Toxics Monitoring Grant | June, 2002 - May 2003 | Included in latest grant proposal | Olneyville Area | Ted Burns | 222-2808 x7012 | eburns@dem.state.ri.us |
| 3.1.2 | Survey businesses in Olneyville to determine sources that perform metal plating and/or use volatile organic compounds. | RIDEM-OAR, NBC | EPA- Air Pollution Control Grant | July, 2001 - Jan 2002 | | Olneyville Area | Ted Burns | 222-2808 x7012 | eburns@dem.state.ri.us |
| Strategy 3.2: Increase public awareness of known and assumed environmental health risks. | | | | | | | | | |
| 3.2.1 | A. Present Do's and Don'ts of the Woonasquatucket to Providence, North Providence and Johnston residents. | NRICD/NRCS/WRWC/EPA | | Ongoing | Ongoing | Entire Watershed | Jenny Pereira | 455-8880 | jpereira@providenceplan.org |
| 3.2.1 | B. Prepare one copy of Do's and Don'ts tailored to each community | NRICD/NRCS/WRWC/EPA | | Ongoing | Ongoing | Entire Watershed | Jenny Pereira | 455-8880 | jpereira@providenceplan.org |
| 3.2.1 | C. Work with local libraries to circulate slide show and script. | NRICD/NRCS/WRWC/EPA | | Ongoing | Ongoing | Entire Watershed | Jenny Pereira | 455-8880 | jpereira@providenceplan.org |
| 3.2.2 | A. Develop ability to produce all outreach materials in multiple languages | NRICD/ NRCS/ WRWC/ RIDEM - SWO,FW/EPA | | Ongoing | Ongoing | Entire Watershed | Jenny Pereira | 455-8880 | jpereira@providenceplan.org |
| 3.2.3 | Expand outreach efforts regarding the impacts of lead to watershed residents. | RIDOH/EPA | | Ongoing | Ongoing | Entire Watershed | Jenny Pereira | 455-8880 | jpereira@providenceplan.org |
| Objective 4: Water bodies within the watershed have regular fish tissue sampling and steps taken to avoid the risk to the population. | | | | | | | | | |
| Strategy 4.1: Acquire data and information to support justify funding fish tissue sampling in the watershed | | | | | | | | | |
| 4.1.1 | A. Submit grant proposals to fund fish consumption survey and outreach program pilot in Olneyville area. | EPA/ASRI/ Brown University/ RIDOH/ RIDEM | EPA | Notified by August 2001 | Awaiting Notification | Olneyville Area | Jeri Weiss | (617) 918-1568 | Weiss.Jeri@epamail.epa.gov |
| 4.1.1 | B. Once funded bring local communities in to support multi-lingual bottom-up outreach approach. | EPA/ASRI/ Brown University/ RIDOH/ RIDEM | EPA | | Awaiting Funding | Olneyville Area | Jeri Weiss | (617) 918-1568 | Weiss.Jeri@epamail.epa.gov |
| 4.1.2 | A. Present study findings to state legislature in support of funding a state-wide fish tissue sampling program. | EPA/ASRI/ Brown University/ RIDOH/ RIDEM | EPA | | Awaiting Funding | Olneyville Area | Jeri Weiss | (617) 918-1568 | Weiss.Jeri@epamail.epa.gov |
| Objective 5: Environmental policy and enforcement implemented fairly in urban as well as rural areas. | | | | | | | | | |
| Strategy 5.1: Establish Urban Task Force to address current environmental policies/regulations... | | | | | | | | | |
| 5.1.1 | A. Develop multi-stakeholder team to serve as the task force | RIDEM-SPP,SWO/EPA/RIDOH | RIDEM-SPP,SWO/EPA/RID OH | | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 5.1.1 | B. Begin series of Task force meetings to identify and address all issues of urban environmental equity issues | RIDEM-SPP,SWO/EPA/RIDOH | RIDEM-SPP,SWO/EPA/RID OH | | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 5.1.1 | C. Recommend changes to existing policies and regulations as necessary. | RIDEM-SPP,SWO/EPA/RIDOH | RIDEM-SPP,SWO/EPA/RID OH | | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| TOPIC: Natural, Cultural and Recreational Resources | | | | | | | | | |
| Objective 6: Focus activities, funding and resources to protect, preserve, and restore important natural, cultural and recreational places. | | | | | | | | | |
| Strategy 6.1: Target land acquisition efforts to protect, preserve and restore critical natural habitats. | | | | | | | | | |
| 6.1.1 | A. Include a site's mention in watershed action plans or greenspace protection strategies as part of the criteria | RIDEM-P&D | Open Space Bond | By 2002 | Included in new draft criteria | Entire Watershed | Joe Dias | 222-2776 x4301 | jdias@dem.state.ri.us |

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| 6.1.1 | B. Make sites that are physically connected to other open space score higher to support contiguous greenspaces | RIDEM-P&D | Open Space Bond | By 2002 | Included in new draft criteria | Entire Watershed | Joe Dias | 222-2776 x4301 | jdias@dem.state.ri.us |
| 6.1.1 | C. Establish watershed wide policy to establish contiguous habitat along length of river and tributaries through comprehensive plans, zoning and permit review | municipalities, WRWC, RIDEM | | By 2003 | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.1.2 | Develop site evaluation criteria and training for municipalities and Local Land Trusts | RIDEM, TNC | | By 2002 | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| Strategy 6.2: Assist each community to identify and prioritize important natural, cultural and recreation resources for protection/restoration. | | | | | | | | | |
| 6.2.1 | A. Select consultant for watershed greenspace project | RIDEM-SWO, OFE/Municipalities/WRWC | USFS Grant | By September 2001 | RFP Completed | All watershed Communities | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.2.1 | B. Carry out Greenspace project and complete Greenspace protection strategies for each community | RIDEM-SWO, OFE/Municipalities/WRWC | USFS Grant | By Jan 2003 | Awaiting Selection of Consultant | All watershed Communities | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.2.2 | A. Create regional Greenspace Plan to identify linkages across municipal boundaries | RIDEM-SWO, OFE/Municipalities/WRWC | USFS Grant | By Jan 2003 | Awaiting Selection of Consultant | All watershed Communities | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.2.3 | A. Complete update of RIGIS land use coverage to accurately reflect farmland in watershed communities | RIDEM-AGR | RIDEM-AGR OF | Complete | Complete | Entire Watershed | Eugene Pepper | 222-2781 x 4512 | epepper@dem.state.ri.us |
| 6.2.3 | B. Identify which farms are currently protected | RIDEM-SWO | USFS Grant | By Jan 2003 | Awaiting Selection of Consultant | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.2.3 | C. Develop Preservation Plan and priority list for unprotected farms | RIDEM-AGR | USFS Grant | By Jan 2003 | Awaiting Selection of Consultant | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.2.4 | Plan and implement Heritage River, site and building markers for the watershed. | | | | | Entire Watershed | Eugene Pepper | 222-2781 x 4512 | epepper@dem.state.ri.us |
| Strategy 6.3: Protect and Restore natural habitats including: riparian buffers, wetland and anadromous fish runs throughout the watershed | | | | | | | | | |
| 6.3.1 | A. Identify priority riparian sites for restoration in each community | RIDEM-SWO/Municipalities/WRWC | USFS Grant | By October 2001 | 90% complete | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.3.2 | A. Identify priority wetland sites for restoration | RIDEM-OWR/EPA/URI | EPA Grant | By Jan 2002 | Phase 1 Complete, Phase 2 underway | Entire Watershed | Carol Murphy | 222-4700 x7208 | cmurphy@dem.state.ri.us |
| 6.3.3 | A. develop funding support to make restoration happen | RIDEM-SWO/Municipalities/WRWC/EPA | Various | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.3.4 | A. Acquire necessary funding to complete 3 enhancements and one restoration per year | RIDEM-SWO/Municipalities/WRWC/EPA | | | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.3.5 | A. Identify funding for Riparian buffer management/implementation plan | RIDEM-SWO, OFE/EPA | | | | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 6.3.6 | Increase enforcement activity against violators of wetland regulations | RIDEM-OCI | RIDEM OF | Ongoing | Ongoing | Statewide | Hank Ellis | 222-4700 x7401 | hellis@dem.state.ri.us |
| 6.3.7 | Coordinate with appropriate agencies too incorporate fish passage into dam repair/replacement projects | RIDEM-SWO, P&D | Various | Ongoing | 2 dams being considered for fish passage | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| Strategy 6.4: Develop the capacity of communities to preserve and reuse historic structures such as mills | | | | | | | | | |
| 6.4.1 | A. Conduct a mill evaluation study of all remaining mill buildings in the watershed. | RIEDC ?? | | | | | | | |
| 6.4.2 | A. Develop an economic plan for the reuse of appropriately targeted buildings | RIEDC ?? | | | | | | | |
| 6.4.3 | A. Compile list of example where mills have been successfully reused. | WRWC/RIEDC? | | | | | | | |
| Strategy 6.5: Construct North West Bike Trail/Woonasquatucket River Greenway along the River and connect to destinations. | | | | | | | | | |

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| 6.5.1 | Continue efforts to construct North West Bike Trail/Woonasquatucket River Greenway segments at Lincoln Lane and Braid and Riverside mills | RIDOT, City of Providence, RIDEM-OWM | | | | | | | |
| 6.5.2 | Work with Town of Johnston to move proposed North West Bike Trail/Woonasquatucket River Greenway off road and along the river as much as possible (old railway bed) | RIDOT/ RIDEM P&D | | | | | | | |
| 6.5.3 | Planning for linking the proposed North West Bike Trail/Woonasquatucket River Greenway to the North South Trail and the Blackstone | RIDOT/RIDEM, P&D | | | | | | | |
| TOPIC: Planning | | | | | | | | | |
| Objective 7: Provide watershed communities with the information, tools, training and financial resources necessary to effectively plan for and manage growth in a way that reflects the community's needs and goals while minimizing | | | | | | | | | |
| Strategy 7.1: Provide local boards and commissions with the appropriate tools and model ordinances that reflect community goals. | | | | | | | | | |
| 7.1.1 | Complete greenspace implementation strategies for each community | RIDEM-SWO,OFE/RIDOA | USFS Grant | By Jan 2003 | Awaiting Selection of Consultant | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 7.1.2 | Create grant guide and assist with grant writing for municipalities | RIDEM-SWO | RIDEM OF | Ongoing | Grant Guide 90% complete | NA | Gregg Cassidy | 222-3434 x 4403 | gcassidy@dem.state.ri.us |
| 7.1.3 | Hold sustainable development workshops in each community | RIDEM-SWO/EPA/RIDOA | RIDEM-SWO/EPA/RIDOA | Ongoing | Ongoing | Watershed Communities | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 7.1.5 | Identify funding for hardware and software support in communities (GIS and Internet) | RIDEM-SWO,WRWC/EPA/RIDOA SPP | RIDEM-SWO,WRWC/EPA/RIDOA SPP | Ongoing | Ongoing | Watershed Communities | John Stachelhaus | 222-6483 | |
| 7.1.6 | Assist communities with Greenway overlay zoning | RIDEM/RIDOA | | | | | | | |
| TOPIC: Remediation and Reuse of Contaminated Sites | | | | | | | | | |
| Objective 8: Remediate and where appropriate reuse contaminated sites within the watershed. | | | | | | | | | |
| Strategy 8.1: Continue ongoing remediation efforts and increase efforts to identify and prioritize other sites. | | | | | | | | | |
| 8.1.1 | Identify and prioritize all brownfield sites for remediation | RIDEM-OWM,RIEDC/EPA | RIDEM-OWM,RIEDC/EPA | Ongoing | Ongoing | Watershed Communities | Kelly Owens | 222-2797 x7108 | kowens@dem.state.ri.us |
| 8.1.2 | Assist communities in remediation and marketing of brownfields. | RIDEM-OWM,RIEDC/EPA | RIDEM-OWM,RIEDC/EPA | Ongoing | Ongoing | Watershed Communities | Kelly Owens | 222-2797 x7108 | kowens@dem.state.ri.us |
| 8.1.3 | Work with communities to integrate remedial sites into larger open space and recreation efforts. | RIDEM-OWM-SWO/EPA | RIDEM-OWM,RIEDC/EPA | Ongoing | Ongoing | Watershed Communities | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 8.1.4 | Continue to monitor and take active participation role in the Centredale Manor Superfund Site. | RIDEM-OWM/EPA/WRWC | | Ongoing | Ongoing | Centredale Manor | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| Strategy 8.2: Clean-up solid waste disposal sites in the watershed (including all tire piles) and improve regulations and enforcement actions to prevent further illegal dumping. | | | | | | | | | |
| 8.2.1 | Complete Johnston tire pile clean-up. | RIDEM-ER,OCI | | Complete | Complete | River Road Johnston | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 8.2.2 | Use existing authority to mandate clean-ups of private property. | RIDEM-OCI | | | | Entire Watershed | Hank Ellis | 222-4700 x7401 | hellis@dem.state.ri.us |
| 8.2.3 | Review and improve existing recycling programs for tires and batteries. | RIRR/RIDEM/WRWC | | | | Statewide | | | |
| TOPIC: Sustainable Economic Development | | | | | | | | | |
| Objective 9: Build on the recent economic successes that have highlighted the river. Integrate environmental restoration and remediation opportunities with economic development projects. Focus on development projects that enhance environmental quality while preserving historic character and creating strong economic development. | | | | | | | | | |

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| Strategy 9.1: Assist urban communities to develop and support development practices that enhance the environmental quality of the river while preserving the cultural and historic characteristics of the neighborhoods. | | | | | | | | | |
| 9.1.1 | Develop an urban design manual that clearly outlines methods communities can use to meet the objective. | RIDEM, SWO/EPA/Others?? | RIDEM, SWO/EPA/Others?? | By 2003 | Proposal under development | Urban areas in state | Peter Hanlon | 222-3434 x 7040 | phanlon@dem.state.ri.us |
| 9.1.2 | Give incentives to developers who design projects, which adhere to the recommended standards of the design manual. | Municipalities | | | | | | | |
| 9.1.3 | Assist communities in marketing brownfields and other environmentally challenged sites. | RIEDC/EPA/RIDEM,OWM | | | | | Kelly Owens | 222-2797 x7108 | kowens@dem.state.ri.us |
| 9.1.4 | Develop ways to protect historic mills within the watershed and put them into productive reuse. | RIEDC/RIHS | | | | | | | |
| 9.1.5 | Help urban communities identify economic reinvestment opportunities. | RIEDC | | | | | | | |
| 9.1.6 | Help communities to identify an economic identity for the watershed, unifying economic initiatives while promoting watershed awareness. | RIEDC | | | | | | | |
| 9.1.7 | Assist the Olneyville area in Providence, Railroad Avenue area in Johnston, and the Centredale area in North Providence with site specific economic development planning. | RIEDC | | | | | | | |
| TOPIC: Flood Protection and Dam Repair/Removal | | | | | | | | | |
| Objective 10: Develop a long range dam repair and removal plan for the purpose of dam safety, flood control, habitat restoration, and recreation. | | | | | | | | | |
| Strategy 10.1: Complete a dam characterization for all Woonasquatucket Watershed Dams. Make recommendation for repair or removal. | | | | | | | | | |
| 10.1.1 | Identify and pursue grant opportunities to complete a dam characterization report and make recommendations for removal or repair. | RIDEM | | By 2003 | Ongoing | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 10.1.2 | Identify funding opportunities for dam projects. | RIDEM | | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| Objective 11: Identify and correct flooding problems in the watershed. | | | | | | | | | |
| Strategy 11.1: Protect and restore natural drainage and flood control systems (i.e. Wetland and riparian restorations, stream and river reclamation and maintenance, daylighting) in the watershed. | | | | | | | | | |
| 11.1.1 | Complete a flood study of the river and its tributaries. | | | | | | | | |
| 11.1.2 | Continue efforts of riparian and wetland restorations for habitat and flood storage. | RIDEM,SWO/NRCS/EPA/USFS | | Ongoing | Ongoing | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| Topic: Watershed Organization Capacity | | | | | | | | | |
| Objective 12: Provide the WRWC with the sustained financial capacity to effectively operate and achieve their goals. | | | | | | | | | |
| Strategy 12.1: Seek legislative funding for designated Watershed Councils | | | | | | | | | |
| 12.1.1 | Work with state legislators and the Rivers Council to fund designated watershed councils. | All Stakeholders | State Legislature | By 2002 | Initial funding approved by legislature | Designated Watersheds | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 12.1.2 | Include watershed organizations in state and federal grant opportunities. | All Stakeholders | All Stakeholders | Ongoing | WRWC included in greenspace project funding | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |

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| Objective 13: Develop and implement consistent watershed outreach effort. | | | | | | | | | |
| Strategy 13.1: Provide watershed outreach materials and funding to the council to build constituency and support for their goals. | | | | | | | | | |
| 13.1.1 | Include outreach components to grant projects within the watershed. | All Stakeholders | All Stakeholders | Ongoing | Outreach part of Riaprian and Greenspace projects | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 13.1.2 | Provide funding for printing and design of outreach materials. | ALL Stakeholders | ALL Stakeholders | Ongoing | Placemats and Asset Map complete | Entire Watershed | Fred Presley | 222-3434 ext. 4417 | fpresley@dem.state.ri.us |
| 13.1.3 | Design and erect signage throughout the watershed for streams and other water bodies which bring attention to the watershed. | WRWC/RIDOT/RIDEM/EPA | | Ongoing | | Entire Watershed | Jenny Pereira | 455-8880 | jpereira@providenceplan.org |
| TOPIC: Transportation | | | | | | | | | |
| Objective 14: Stakeholders identify opportunities for integrating environmental enhancement/restoration projects with transportation projects. | | | | | | | | | |
| Strategy 14.1: Coordinate public works projects with enhancement and restoration efforts. | | | | | | | | | |
| 14.1.1 | Continue current design remediation efforts at Lincoln Lace and Braid and Riverside Mills sites with bike path construction. | Municipality/RIDOT | | | | | | | |
| 14.1.2 | Publicize road design schedule to allow for coordination with other local projects and potential restoration efforts. | RIDOT | | | | | | | |
| 14.1.3 | Continue efforts to construct North West Bike Trail/Woonasquatucket River Greenway segments at Lincoln Lace and Braid and Riverside mills | RIDOT/RIDEM P&D/Municipality | | | | | | | |
| Objective 15: Transportation needs of the watershed community are understood and efforts to address those needs are underway. | | | | | | | | | |
| Strategy 15.1: Evaluate current transportation options | | | | | | | | | |
| 15.1.1 | Conduct a needs analysis of the transportation needs of the watershed Communities, and potential for alternative modes of transportation. | RIDOT/Municipalities | | | | | | | |
| 15.1.2 | Improve access to public transportation | RIDOT/Municipalities | | | | | | | |
| Objective 16: Traffic congestion problems are eliminated and new linkages have been established between communities. | | | | | | | | | |
| Strategy 16.1: Engage in traffic calming and feasibility studies to address key transportation related issues. | | | | | | | | | |
| 16.1.1 | Conduct traffic calming study along Route 6 in Providence to its merge with Route 10. | RIDOT | | | | | | | |
| 16.1.2 | Study feasibility of north-south link by road and bicycle path in Providence to link Olneyville and Elmwood. | RIDOT/ RIDEM-P&D | | | | | | | |